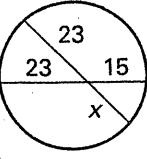


LESSON 10.6 Practice
For use with pages 688-695

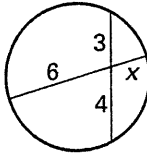
odds

Find the value of x .

1. 

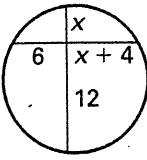
$$\frac{23(15)}{23} = \frac{23x}{23}$$

$$15 = x$$

2. 

$$\frac{6x}{6} = \frac{12}{6}$$

$$x = 2$$

3. 

$$6(x+4) = 12x$$

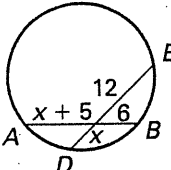
$$6x + 24 = 12x$$

$$-6x \quad -6x$$

$$24 = 6x$$

$$4 = x$$

Find AB and DE .

4. 

$$6(x+5) = 12x$$

$$6x + 30 = 12x$$

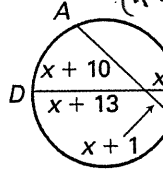
$$-6x \quad -6x$$

$$30 = 6x$$

$$5 = x$$

$$AB = 5 + 5 + 6 = 16$$

$$DE = 12 + 5 = 17$$

5. 

$$(x+13)x = (x+10)(x+1)$$

$$x^2 + 13x = x^2 + 11x + 10$$

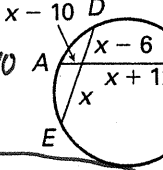
$$-11x \quad -11x$$

$$2x = 10$$

$$x = 5$$

$$AB = 5 + 10 + 5 = 20$$

$$DE = 5 + 13 + 5 = 23$$

6. 

$$x(x-6) = (x+12)(x-10)$$

$$x^2 - 6x = x^2 - 10x + 12x - 120$$

$$-x^2 \quad -x^2$$

$$-6x = 2x - 120$$

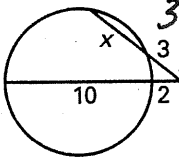
$$+6x \quad +6x + 120$$

$$120 = 8x$$

$$\frac{120}{8} = \frac{8x}{8}$$

$$15 = x$$

Find the value of x .

7. 

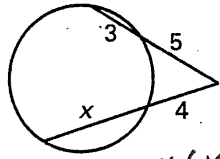
$$3(x+3) = 2(12)$$

$$3x + 9 = 24$$

$$-9 \quad -9$$

$$3x = 15$$

$$x = 5$$

8. 

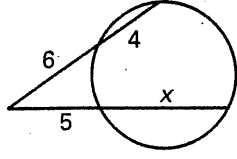
$$5(8) = 4(x+4)$$

$$40 = 4x + 16$$

$$-16 \quad -16$$

$$24 = 4x$$

$$x = 6$$

9. 

$$6(10) = 5(x+5)$$

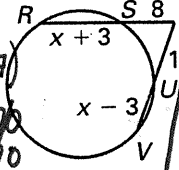
$$60 = 5x + 25$$

$$-25 \quad -25$$

$$35 = 5x$$

$$x = 7$$

Find RT and TV .

10. 

$$8(x+3) = 10(x-3)$$

$$8x + 24 = 10x - 30$$

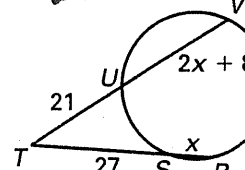
$$-2x \quad -2x$$

$$-60 = -2x$$

$$30 = x$$

$$RT = 20$$

$$TV = 16$$

11. 

$$21(2x+8) = 27(x+27)$$

$$42x + 168 = 27x + 729$$

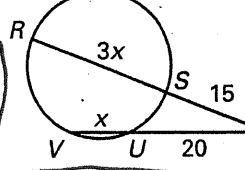
$$-27x \quad -27x$$

$$15x = 561$$

$$x = 37.4$$

$$TV = 45$$

$$TR = 35$$

12. 

$$15(3x+15) = 20(x+20)$$

$$45x + 225 = 20x + 400$$

$$-20x \quad -20x$$

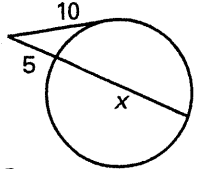
$$25x = 175$$

$$x = 7$$

$$RT = 36$$

$$TV = 27$$

Find the value of x .

13. 

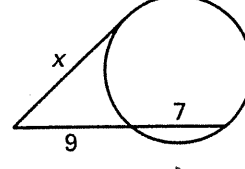
$$10^2 = 5(x+5)$$

$$100 = 5x + 25$$

$$-25 \quad -25$$

$$75 = 5x$$

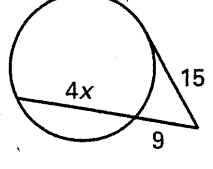
$$15 = x$$

14. 

$$x^2 = 9(16)$$

$$\sqrt{x^2} = \sqrt{144}$$

$$x = 12$$

15. 

$$15^2 = 9(4x+9)$$

$$225 = 36x + 81$$

$$-81 \quad -81$$

$$144 = 36x$$

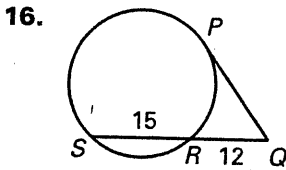
$$4 = x$$

LESSON 10.6

Practice *continued*

For use with pages 688-695

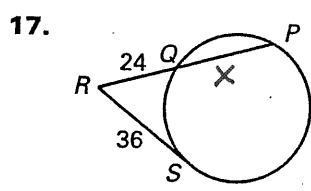
Find PQ.



$$PQ^2 = 12(27)$$

$$\sqrt{PQ^2} = \sqrt{324}$$

$$PQ = 18$$

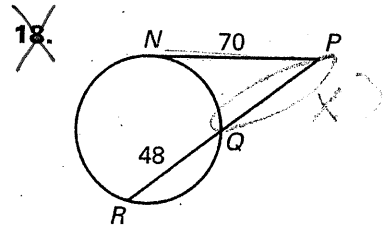


$$36^2 = 24(x+24)$$

$$1296 = 24x + 576$$

$$\begin{array}{r} -576 \\ \hline 720 = 24x \\ \hline 24 \quad \quad 24 \end{array} \quad x = 30$$

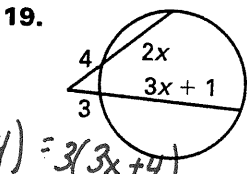
$$PQ = 30$$



$$70^2 = x(x+48)$$

$$4900 = x^2 + 48x$$

Find the value of x.

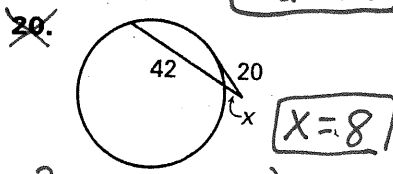


$$4(2x+4) = 3(3x+4)$$

$$8x+16 = 9x+12$$

$$\begin{array}{r} -8x \quad -12 \quad -8x \quad -12 \\ \hline \end{array}$$

$$x = 4$$



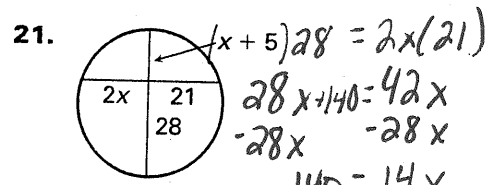
$$20^2 = x(x+42)$$

$$400 = x^2 + 42x - 400$$

$$\begin{array}{r} -400 \\ \hline 0 = (x-8)(x+50) \\ \hline \end{array}$$

$$x = 8, -50$$

$$x = 8$$

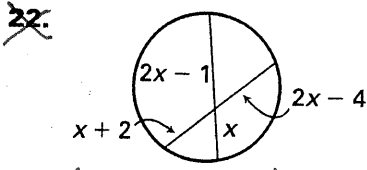


$$(x+5)28 = 2x(21)$$

$$28x+140 = 42x$$

$$\begin{array}{r} -28x \quad -28x \\ \hline 140 = 14x \\ \hline \end{array}$$

$$x = 10$$

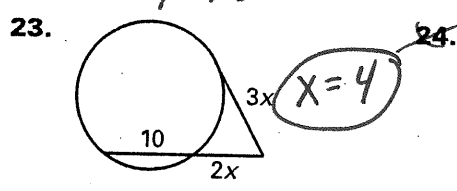


$$(2x-1)x = (x+2)(2x-4)$$

$$2x^2 - x = 2x^2 - 8x - 2x + 8$$

$$\begin{array}{r} -2x^2 \quad -2x^2 \\ -x \quad -8x \\ \hline -x = -8x \\ \hline \end{array}$$

$$x = 8$$



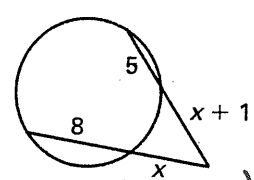
$$(3x)^2 = 2x(2x+10)$$

$$9x^2 = 4x^2 + 20x$$

$$\begin{array}{r} -4x^2 \quad -4x^2 \\ \hline 5x^2 = 20x \\ \hline 5x(x-4) = 0 \\ \hline \end{array}$$

$$x = 0, 4$$

$$x = 4$$

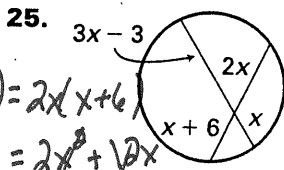


$$(x+1)(6+x) = x(x+8)$$

$$6x+6+x^2+x = x^2+8x$$

$$\begin{array}{r} -x^2 \quad -x^2 \\ -6x \quad -7x \\ \hline 6 = x \\ \hline \end{array}$$

$$6 = x$$



$$x(3x-3) = 2x(x+6)$$

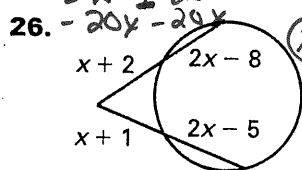
$$3x^2 - 3x = 2x^2 + 12x$$

$$\begin{array}{r} -2x^2 \quad -2x^2 \\ -12x \quad -12x \\ \hline x^2 - 15x = 0 \\ \hline \end{array}$$

$$x(x-15) = 0$$

$$x = 0, 15$$

$$x = 15$$



$$(x+2)(2x-5) = (2x-8)(x+1)$$

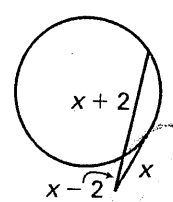
$$2x^2 - 20x + 10 = 2x^2 - 6x - 8$$

$$\begin{array}{r} -2x^2 \quad -2x^2 \\ -20x \quad -6x \\ \hline -14x + 18 = -8 \\ \hline \end{array}$$

$$-14x = -26$$

$$x = 1.857$$

$$x = 4$$



$$x^2 = (x-2)(2x)$$

$$x^2 = 2x^2 - 4x$$

$$\begin{array}{r} -x^2 \quad -x^2 \\ \hline 0 = -4x \\ \hline \end{array}$$

$$0 = x(x-4)$$

$$x = 0, 4$$

$$x = 4$$